REMARKS

Claims 1-30 are pending. In this amendment, claims 1, 7, 14, 23, and 27 are amended to define with more specificity embodiments of the invention. No new matter is entered.

Informalities:

With this amendment, the section headings of the application are amended to remove the underlining, as requested by the Examiner. Additionally, the reference number "32" is added in FIG. 4, as shown in the attached replacement drawing, also as requested by the Examiner.

Claimed embodiments of the invention

Claimed embodiments of the invention are directed to a system for providing power to a computer mouse or other peripheral using inductive power transfer. A source loop is energized to create a constantly changing magnetic field. The victim loop is positioned within the created magnetic field, and an induced volage and current flows in the victim loop. The victim loop can be coupled to a circuit to be powered, such as a mouse circuit. Or, conveniently, the victim loop can be structured to charge a power storage device in the mouse, such as a battery.

Differences between the claimed embodiments and the cited art

Published Japanese abstract 2001-159948 to Shimono (Shimono) is difficult to fully understand because of the poor machine translation. It appears to include two grids of wires in a mousepad, Lx and Ly (Drawing 2) laid out in a perpendicular grid pattern. Although Simono purports to inductively transfer power to a mouse, it is hard to understand how this is possible.

More particularly, any induced magnetic field produced by electricity flowing in a first direction is offset by the electricity flowing in the opposite direction. With reference to Drawing 2, and specifically to the grid of Lx, assume current flows from the point "X1" to "X2." Any induced magnetic field produced in the left-most wire of Lx (current flowing "upward" in drawing 2) is offset by the magnetic field produced in the next-to-left-most wire of Lx, where current is flowing "downward."

Shimono himself, in the "Example" section, beginning at line 9 says "In the pad coils Lx and Ly, since the current of a retrose [sic] is flowing mutually to adjacent wire, the

electromagnetic wave radiated from each wire is offset, and at the distant place (for example, 3m), radiation electromagnetic field become a low thing from a mouse pad entirely."

In other words, magnetic flux from a first wire is offset from an adjacent wire, and the overall net magnetic field produced by Simono is zero.

Claimed embodiments of the invention, conversely, do not use a planer source whatsoever for producing the magnetic field. In these embodiments, the source coil is a solenoid, which is a three-dimensional structure.

The "New IEEE Standard Dictionary of Electrical and Electronics Terms, Fifth Edition" defines "Solenoid" as: "An electric conductor wound as a helix with a small pitch, or as two or more coaxial helixes." (emphasis added). This definition is attached as Exhibit A to this amendment.

Using a solenoid or non-planar structure as a source loop allows the magnetic flux to flow in a single direction throughout the entire core of the solenoid. This is illustrated, for example in Figures 2 and 3 of the application. In those figures, the source loop is a three-dimensional structure that causes the magnetic flux to travel in a relatively straight line through the middle of the source loop. Adding a relatively strong magnetically permeable material, such as iron filings to the mousepad, causes an even stronger magnetic field to travel through the solenoid, as illustrated in Figure 3.

Using a solenoid structure as a source loop is not taught nor suggested by the teachings of using a planar grid structure as the source "loop" structure. Because mousepads are planar structures, inventors would be inclined to use a planar structure. Indeed, in the references cited, all of the source "loops" are described and illustrated as planar structures. These prior inventors never conceived of using a three-dimensional structure, even though it would have helped their effort had they done so. Therefore, the claimed embodiments of the invention are novel and non-obvious changes to the prior art, and are thus patentable.

In particular, the prior art does not teach or suggest a "a source loop solenoid" as recited in claims 1, 23, and 27, and a "non-planar magnetic source loop" as recited in claim 14.

Additionally, many of the dependent claims include features and advantages also not taught nor suggested by the prior art. For instance, claim 7 recites that the "victim loop is a coil of wire having a solenoid shape," which is not shown anywhere in the prior art, as both Shimono and Tien (GB 2314470) show that the victim loop is also planar (Shimono, Drawing 3, and Tien, Fig. 3).

Also, claim 22 indicates that the source loop and the victim loop are "horizontally overlapped." This embodiment is illustrated in, for example, Figure 8 of the specification, where portions of both the mouse 30 and mousepad 20 are aligned in the same horizontal plane. In both Simono and Tien, the mouse is always described or shown as lying over the mousepad. See, for example, Drawing 15 of Simono (mouse and mousepad are separated by the dotted line) and Figure 3 of Tien.

For the foregoing reasons, reconsideration and allowance of claims 1-30 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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The New IEEE Standard Dictionary of Electrical and Electronics Terms

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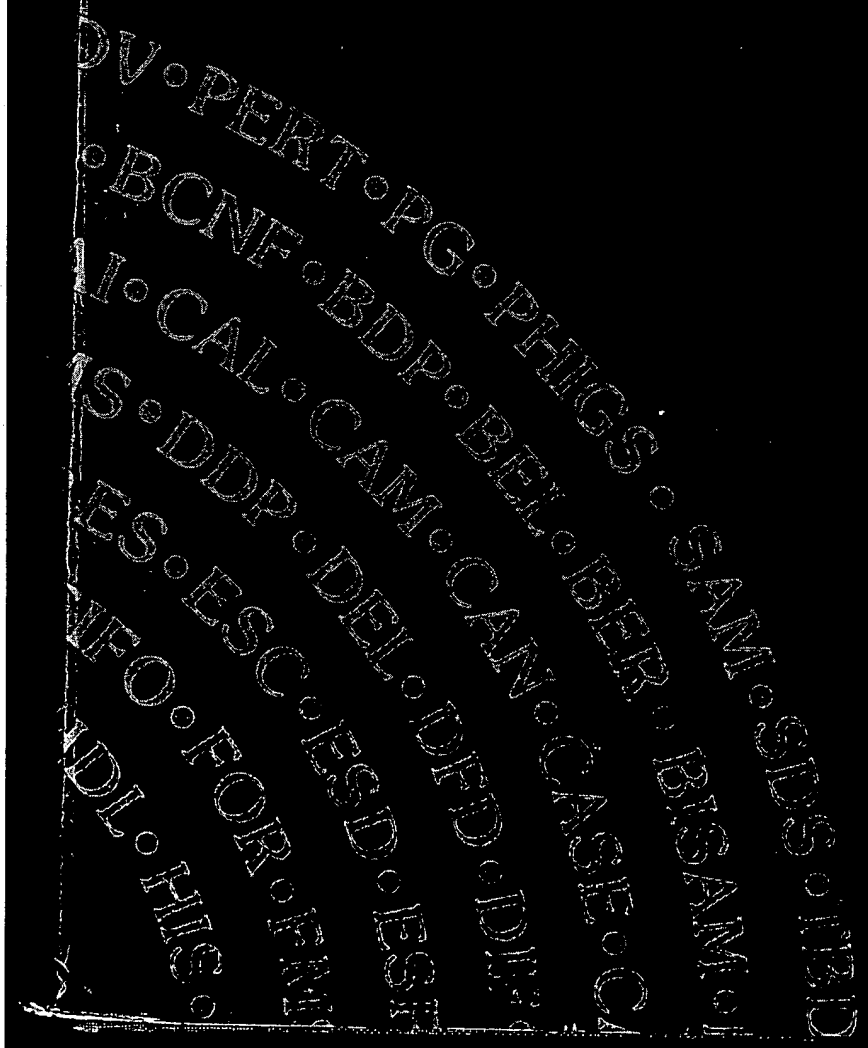

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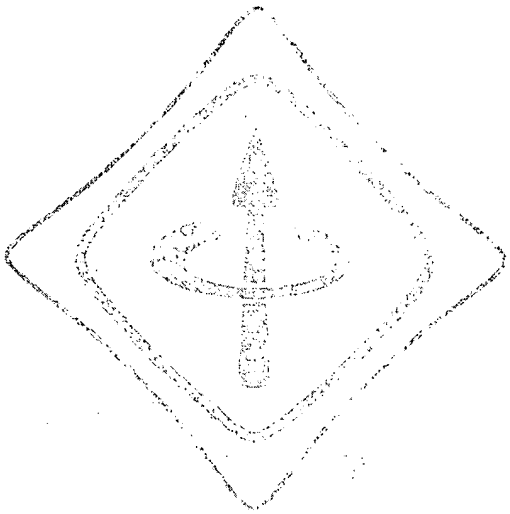

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background noise sources by several orders of magnitude. [25]

solar panel (photovoltaic power system). *See:* **solar array.**

solar radiation simulator (illuminating engineering). A device designed to produce a beam of collimated radiation having a spectrum, flux density, and geometric characteristics similar to those of the sun outside the earth's atmosphere. [126]

solar wind (communication satellite). Energetic particles emitted by the sun and travelling through space. [19]

solderability. That property of a metal surface to be readily wetted by molten solder. [105]

soldered joints. The connection of similar or dissimilar metals by applying molten solder, with no fusion of the base metals. [105]

solder projections. Icicles, nubs, and spikes are undesirable protrusions from a solder joint. [105]

solder splatter. Unwanted fragments of solder. [105]

solenoid. An electric conductor wound as a helix with a small pitch, or as two or more coaxial helixes. *See:* **solenoid magnet.** 270-1966w

solenoid magnet (solenoid) (industrial control). An electromagnet having an energizing coil approximately cylindrical in form, and an armature whose motion is reciprocating within and along the axis of the coil. 270-1966w, [60]

solenoid relay. *See:* **plunger relay.**

soleplate (rotating machinery). A support fastened to a foundation on which a stator frame foot or a bracket arm can be mounted. *See:* **slide rail.** [9]

solicited messages. A negotiated data transfer in message space. *See:* **data transfer; message space.** 1296-1987

solid angle (laser-maser) (ω). The ratio of the area on the surface of a sphere to the square of the radius of that sphere. It is expressed in steradians. 586-1980w

solid angle factor, Q (illuminating engineering). A function of the solid angle (w) subtended by a source and is given by

$$Q = 20.4\omega = 1.52\omega^{0.2} - 0.075$$

See: **index of sensation.** [126]

solid-beam efficiency (antennas). The ratio of the power received over a specified solid angle when an antenna is illuminated isotropically by uncorrelated and unpolarized waves to the total power received by the antenna. *Note:* This term is sometimes used to mean the power received corresponding to a particular polarization over the solid angle to the total power received. Equivalently, the term is used to mean the power radiated over a specified solid angle by the antenna corresponding to a particular polarization to the total power radiated. 145-1983

solid bushing (outdoor electric apparatus). A bushing in which the major insulation is provided by a ceramic or analogous material. 21-1976

solid conductor. A conductor consisting of a single wire. *See:* **conductor.** [10]

solid contact. A contact having relatively little inherent flexibility and whose contact pressure is supplied by another member. C37.100-1981

solid coupling (rotating machinery). A coupling that makes a rigid connection between two shafts. *See:* **rotor (rotating machinery).** [9]

solid electrolytic capacitor. A capacitor in which the dielectric is primarily an anodized coating on one electrode, with the remaining space between the electrodes filled with a solid semiconductor. 43-1974

solid enclosure. An enclosure that will neither admit accumulations of flyings or dust nor transmit sparks or flying particles to the accumulations outside. [119]

solid-iron cylindrical-rotor generator. *See:* **cylindrical-rotor generator.**

solidly grounded (power and distribution transformer). Grounded through an adequate ground connection in which no impedance has been inserted intentionally. *Note:* Adequate as used herein means suitable for the purpose intended. C57.12.80-1978

solid-material fuse unit (power switchgear). A fuse unit in which the arc is drawn through a hole in solid material. C37.40-1981, C37.100-1981

solid modeling. A method of displaying solid constructions on a graphical display device using geometric forms such as cubes, cones, spheres, and cylinders. 610.6-1991

solid-pole synchronous motor. A salient-pole synchronous motor having solid steel pole shoes, and either laminated or solid pole bodies. [9]

solid rotor (rotating machinery). (A) A rotor, usually constructed of a high-strength forging, in which slots may be machined to accommodate the rotor winding. (B) A spider-type rotor in which spider hub is not split. *See:* **rotor (rotating machinery).** [9]

solid-state component. A component whose operation depends on the control of electric or magnetic phenomena in solids, for example, a transistor, crystal diode, ferrite core. [20], [85]

solid-state device (control equipment). A device that may contain electronic components that do not depend on electronic conduction in